

ATTORNEY DOCKET NO. 11470BA (NORT10-00350)
U.S. SERIAL NO. 09/577,292
PATENT

CLAIMS

No claims have been amended. However, for the convenience of the Examiner, the claims are set forth below:

1. (Previously Presented) A method of admitting calls over a network, comprising:
receiving a call request for establishing a call and capable of affecting a network resource, the call request defining a throughput requirement and comprising an origination address for identifying an origination terminal and an identifier for identifying a destination terminal;
transmitting a throughput measurement request, the throughput measurement request causing a trace packet to propagate between the origination terminal and the destination terminal;
receiving a throughput measurement response in response to the transmitting of the throughput measurement request; and
transmitting a call admission response to the origination terminal when the throughput measurement response at least substantially matches the throughput requirement of the call request.
2. (Original) The method of claim 1, further comprising selecting one or more network resource as a resource candidate for use in the requested call.
3. (Previously Presented) The method of claim 2, wherein the selecting one or more network resource is based on the call admission response.

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4. (Previously Presented) The method of claim 2, wherein the selecting one or more network resources is determined by usage policy of a policy server.
5. (Original) The method of claim 1, wherein the throughput requirement relates to a perceptible quality of service.
6. (Original) The method of claim 1, wherein the throughput requirement is specified in a packet header.
7. (Original) The method of claim 1, wherein the throughput requirement complies with Resource Reservation Protocol (RSVP).
8. (Original) The method of claim 1, wherein the throughput requirement complies with Diffserv Protocol.
9. (Original) The method of claim 1, wherein the throughput requirement complies with MultiProtocol Label Switching (MPLS) Protocol.
10. (Original) The method of claim 1, wherein the call request complies with Session Initiation Protocol.

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11. (Original) The method of claim 1, further comprising ranking the network resource according to a merit rating, the merit rating being based on the throughput measurement of the network resource.
12. (Original) The method of claim 11, further comprising selecting resources according to the merit rating.
13. (Previously Canceled).
14. (Original) The method of claim 1, wherein the throughput measurement request comprises at least one trace packet.
15. (Original) The method of claim 1, wherein the throughput measurement request comprises a trace route.
16. (Original) The method of claim 15, wherein the trace route comprises a list of network resources.
17. (Original) The method of claim 16, further comprising the step of monitoring the network resources in the list to maintain the throughput requirement.

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18. (Original) The method of claim 1, further comprising selecting one or more sizes of a data packet as candidates for carrying audio data in the requested call.

19. (Original) The method of claim 1, further comprising selecting an alternative resource as the network resource when the throughput measurement does not substantially match the throughput requirement of the call request.

20. (Original) The method of claim 19, wherein the alternative resource comprises a switched telephone network.

21. (Original) The method of claim 19, wherein the alternative resource comprises a dedicated communications link interconnecting network resources.

22. (Original) The method of claim 1, further comprising transmitting an alternative resource call admission response when the throughput measurement does not substantially match the throughput requirement of the call request.

23. (Original) The method of claim 1, further comprising determining a condition of the network resource.

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24. (Original) The method of claim 23, wherein the determining includes determining a delay in the throughput measurement in the network.

25. (Original) The method of claim 23, wherein the determining includes determining a percentage of packet loss in the network.

26. (Original) The method of claim 23, further comprising determining an expected quality of service based on the determined condition of the network resource.

27. (Original) The method of claim 1, further comprising performing call admission control to accept or deny the call request.

28. (Original) The method of claim 27, wherein performing call admission control is based on usage of a link in the network.

29. (Original) The method of claim 27, wherein at least two terminals are defined in at least two communities coupled by a link in the network, and wherein performing call admission control includes performing call admission control based on a policy for the link between the communities.

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30. (Original) The method of claim 29, further comprising bypassing the call admission control within at least one community.

31. (Previously Presented) The method of claim 1, wherein one of the call request, the throughput measurement request, the throughput measurement response and the call admission response is communicated over a data bus.

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32. (Previously Presented) An apparatus for admitting calls over a network, comprising:

a receiver for receiving a call request for establishing a call and capable of affecting a network resource, the call request defining a throughput requirement and comprising an origination address for identifying an origination terminal and an identifier for identifying a destination terminal;

a transmitter for transmitting a throughput measurement request, the throughput measurement request causing a trace packet to propagate between the origination terminal and the destination terminal;

a receiver for receiving a throughput measurement response in response to the transmitting of the throughput measurement request; and

a transmitter for transmitting a call admission response to the origination terminal when the throughput measurement response at least substantially matches the throughput requirement of the call request.

33. (Original) The apparatus of claim 32, further comprising a selector to select one or more network resource as a resource candidate for use in the requested call.

34. (Original) The apparatus of claim 33, wherein the selector is adapted to select one or more network resource based on the call admission response.

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35. (Original) The apparatus of claim 33, wherein the selector is adapted to select one or more network resource based on a usage policy of a policy server.

36. (Original) The apparatus of claim 32, wherein the throughput requirement relates to a perceptible quality of service.

37. (Original) The apparatus of claim 32, wherein the throughput requirement is specified in a packet header.

38. (Original) The apparatus of claim 32, wherein the throughput requirement complies with Resource Reservation Protocol (RSVP).

39. (Original) The apparatus of claim 32, wherein the throughput requirement complies with Diffserv Protocol.

40. (Original) The apparatus of claim 32, wherein the throughput requirement complies with MultiProtocol Label Switching (MPLS) Protocol.

41. (Original) The apparatus of claim 32, wherein the call request complies with Session Initiation Protocol.

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42. (Original) The apparatus of claim 32, further comprising a controller adapted to rank the network resource according to a merit rating, the merit rating being based on the throughput measurement of the network resource.

43. (Original) The apparatus of claim 42, further comprising a selector to select the network resource according to the merit rating.

44. (Previously Canceled).

45. (Original) The apparatus of claim 32, wherein the throughput measurement request comprises at least one trace packet.

46. (Original) The apparatus of claim 32, wherein the throughput measurement request comprises a trace route.

47. (Original) The apparatus of claim 32, further comprising a selector for selecting one or more sizes of a data packet as candidates for carrying audio data in the requested call.

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48. (Original) The apparatus of claim 32, further comprising a selector for selecting an alternative resource as the network resource when the throughput measurement does not substantially match the throughput requirement of the call request.

49. (Original) The apparatus of claim 48, wherein the alternative resource comprises a switched telephone network.

50. (Original) The apparatus of claim 48, wherein the alternative resource comprises a dedicated communications link interconnecting network resources.

51. (Original) The apparatus of claim 32, further comprising a transmitter for transmitting an alternative resource call admission response when the throughput measurement does not substantially match the throughput requirement of the call request.

52. (Original) The apparatus of claim 32, further comprising a controller adapted to determine a condition of the network resource.

53. (Original) The apparatus of claim 52, wherein the controller adapted to determine a condition of the network resource is further adapted to determine a delay in the throughput measurement.

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54. (Original) The apparatus of claim 52, wherein the controller adapted to determine a condition of the network resource is further adapted to determine a percentage of packet loss in the network.

55. (Original) The apparatus of claim 52, wherein the controller adapted to determine a condition of the network resource is further adapted to determine an expected quality of service based on the determined condition of the network resource.

56. (Original) The apparatus of claim 32, further comprising a call admission control device for accepting or denying the call request.

57. (Original) The apparatus of claim 56, wherein the call admission control device is adapted to admit the call based on usage of a link in the network.

58. (Original) The apparatus of claim 56, wherein at least two terminals are defined in at least two communities coupled by a link in the network, and wherein the call admission control device performs call admission control based on a policy for the link between the communities.

59. (Original) The apparatus of claim 58, further comprising a bypass path for bypassing the call admission control device within at least one community.

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60. (Previously Presented) The apparatus of claim 32, wherein one of the call request, the throughput measurement request, the throughput measurement response and the call admission response is communicated over a data bus.

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61. (Previously Presented) An article including one or more machine-readable storage media containing instructions to manage calls within a telephony system, the instructions when executed causing a controller to:

receive a call request for establishing a call and capable of affecting a network resource, the call request defining a throughput requirement and comprising an origination address for identifying an origination terminal and an identifier for identifying a destination terminal;

transmit a throughput measurement request, the throughput measurement request causing a trace packet to propagate between the origination terminal and the destination terminal;

receive a throughput measurement response in response to the transmitting of the throughput measurement request; and

transmit a call admission response to the origination terminal when the throughput measurement response at least substantially matches the throughput requirement of the call request.

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62. (Previously Presented) A call establishment method comprising:

transmitting a call request to establish a call and capable of affecting a network resource, the call request defining a throughput requirement and comprising an identifier for identifying a destination terminal;

receiving a throughput measurement request for the network resource;

propagating a trace packet to the destination terminal in response to receiving the throughput measurement request;

transmitting a throughput measurement response after propagating the trace packet to the destination terminal; and

receiving a call admission response when the throughput measurement at least substantially matches the throughput requirement of the call request.

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63. (Previously Presented) A call server comprising:

means for receiving a call request for establishing a call and capable of affecting a network resource, the call request defining a throughput requirement and comprising an origination address identifying an origination terminal and an identifier for identifying a destination terminal;

means for transmitting a throughput measurement request, the throughput measurement causing a trace packet to propagate between the origination terminal and the destination terminal;

means for receiving a throughput measurement response in response to the transmitting of the throughput measurement request; and

means for transmitting a call admission response to the origination terminal when the throughput measurement response at least substantially matches the throughput requirement of the call request.